

A meeting of the New Hampshire Water Well Board was held on June 11, 2009 at 9:00 AM, in rooms 111& 112, 29 Hazen Drive, Concord NH, 03302.

Present were: Jeffrey Tasker, Chairman
Rene Pelletier, Secretary

Board Members: Stephen Smith, David Wunsch, Christopher Covell and Thomas Garside

NHDES Staff: Richard Schofield and Allyson Gourley

Chairman Tasker brought the meeting to order at 10:08 AM.

Approval of Minutes

4/23/09 Meeting: Upon motion by Stephen Smith and seconded by Christopher Covell, the Board unanimously voted to accept the Minutes of the meeting.

Complaints

Webster/ A.S.K. Well & Pump, LLC

Mr. Schofield updated the Board regarding a complaint that was heard at the last Water Well Board Meeting. The complaint was submitted by Nancy Webster of Kingston NH, against A.S.K. Well & Pump, LLC, also of Kingston NH.

Mr. Schofield reported that a Settlement Agreement had been reached by the parties, and A.S.K. Well & Pump, LLC had replaced the well screen with a smaller slot screen. Ms. Webster told Mr. Schofield that she was satisfied with the work that was done and that she now has clear water.

Mr. Schofield also reported that Mr. Savarino, of A.S.K. Well & Pump, LLC, had not yet been paid for the work.

The Board decided to continue the matter until notification that A.S.K. Well & Pump has received payment for their work.

Thomas Garside joined the meeting at 10:20 am.

Continuing Education

Mr. Schofield discussed a letter he had received from Bruce Hatch with the Membership. In his letter, Mr. Hatch requested that more training be provided to the North Country. Mr. Schofield said that historically, DES had made a point of providing training to northern NH, but recently the Board had decided that more training should be provided by the private sector. Since that change, the availability of training in northern NH may have declined. Mr. Smith suggested that on-line classes could be an option. The Board members had varying opinions on the issue, but all agreed that the low number of licensed contractors in the North Country has hindered training efforts to that region.

Rene Pelletier joined the meeting at 10:40 am.

Complaints (continued)

Wood / Capital Well Company

Mr. Schofield briefed the Board regarding a complaint received on April 2, 2009 from Lisa Wood of 157 Merrimack Street, Hooksett NH. The complaint is against Capital Well Company, regarding a well they installed at her property in July of 2008. Her complaint alleges that the well produces sediment and the water is high in iron and manganese. She also questions whether the well casing is properly sealed and has been told by another contractor that the electrical wiring is not up to code.

Mr. Schofield told the Board that he conducted an inspection at Ms. Wood's property on May 9, 2009. He provided photographs to the Membership that he had taken during the inspection. The new well is a replacement well. Mr. Schofield stated that the new well is located approximately 10 – 15 feet from the old well. During the inspection, Mr. Schofield observed that the electrical wire from the pressure switch to the disconnect switch was not encased in conduit. He stated that is a code violation.

Board member Stephen Smith informed the Board that he had been hired by Ms. Wood, and therefore he felt he should recuse himself from hearing the matter. The Board agreed, but said that he could be called as a witness by Ms. Wood.

The Board heard testimony from Ms. Wood and Mr. Smith, as well as representatives from Capital Well Company, Terry Swain, Jonathan Swain and Ryan Chicoine. There was considerable discussion about a pre-existing water softening treatment system that had been installed to treat water from the original well. The representatives from Capital Well Company allege that the existing treatment system was not set up correctly, which they claim caused some of the problems that Ms. Wood experienced after the new well was installed; sediment and loss of water pressure. Capital Well Company recommended that the filtration equipment be replaced. Ms. Wood did not want to replace the entire system and eventually both parties agreed to just re-bed and re-configure the existing system. During one visit to the property, Capital Well technician Ryan Chicoine discovered that the backwash line was kinked and as a result the filtration heads had plugged.

Another topic of discussion was the location of Ms. Wood's property. Chris Covell, a member of the Board and a licensed geologist, asked Ms. Wood to locate her property on the "*Bedrock Geologic Map of New Hampshire* by Lyons and others (1997). It was determined that her property was on, or very close to a geological fault line. Members of the Board with a geology background explained why it would not be unusual for a well in this location to have water quality issues.

Ms. Wood told the Board that although her water is still "cloudy" it has improved considerably since the work conducted on the water treatment system.

The Board determined that without additional evidence the only code violation that the Board could address was the electrical cable which needs to be enclosed in conduit.

Mr. Terrell Swain agreed that Capital Well Company would correct the code violation(s) associated with the pump system installation.

Mr. Covell made a Motion that Capital Well Company repair the electrical issues and notify the Water Well Board once the work has been completed. Motion seconded by Mr. Pelletier and unanimously accepted. It was decided that the matter shall remain open until the Board receives notice that the corrections have been made.

Break at 11:45 am.

Reconvene at 11:55 am.

Mr. Smith returned to the meeting.

Christopher Covell had to leave the meeting early due to other obligations. Mr. Covell recently moved to Maine and as such, this was his last Board meeting. He was thanked for his service and received well wishes from his fellow Board members before he left the meeting.

Grout Presentation – Todd Tannehill – CETCO Drilling Products

Mr. Tannehill of CETCO Drilling Products conducted a presentation on a grout study being conducted by the University of Nebraska in conjunction with CETCO, BAROID and WYOBEN. These three companies are major producers of bentonite grout products. Mr. Tannehill explained that the study is not yet completed, and these results are preliminary.

The study was conducted by drilling numerous wells under different environmental conditions using different grout mixtures. Clear casings were used in order to monitor the grout over time. Dye tests were conducted after 1 ½ years. Some of the preliminary results indicate that cement / bentonite grouts exhibit no less cracking than cement grouts. The study indicates that bentonite chips withstand weathering better than a bentonite slurry, particularly in the "vadose" zone. Results also indicate that bentonite grouts hold up well when exposed to salt-water up to 5,000 mg/l. Under sea-water conditions, cement has shown better results.

In response to a question from Staff, Mr. Tannehill suggested that bentonite grouts could be used in wells contaminated by road salt because typically the salt concentrations are less than 5,000 mg/l.

Mr. Tannehill told the Board that the final results of the study will be announced in October 2009.

Break at 1:00 pm.

Reconvene at 1:10 pm.

Grout Requirement for Open Loop Geothermal Wells

Representative Warren Groen wanted an opportunity to speak to the Board and ask questions on this topic. He had come to the last WWB Meeting when the Board failed to have a quorum.

The Membership discussed the rationale for the recently adopted rule requiring open loop geothermal well casings to be grouted with a cement-bentonite grout mix. Well casing are grouted to prevent surface water from channeling along the outside of the well casing and provide a pathway for contamination to the well and potentially the bedrock aquifer. Representative Groen was concerned that the grouting requirement has unnecessarily raised the cost of constructing a geothermal well and was seeking additional information from the Board to justify the need.

Mr. Schofield reported that in preparing the fiscal impact statement for the rulemaking the Board had estimated the cost to grout 40 feet of 6 inch casing to be \$250 per well. In a poll of six licensed water well contractors conducted for this discussion Mr. Schofield reported the price charged for grouting 40 feet of 6 inch casing ranged from \$250 to \$1,500.

Lunch break at 1:35 pm.

Meeting reconvened at 2:25 pm.

Licensing

License Applicants - Mr. Mackey presented the Membership with a list of nine license applications for the Board's review and provided additional background information on the applications. The Board voted to approved license applications for:

John Snider d/b/a Daniels Artesian Wells
David Dionne d/b/a Environmental Projects Inc
John Diego d/b/a Leggette Brashears & Graham, Inc
Ricky Brassaw d/b/a Brassaw Excavating
Joseph Miranda d/b/a Aquifer Drilling and Testing Inc
Robert Weeks d/b/a American EcoThermal

Three applications were not approved.

Exams - Mr. Schofield gave the Membership an overview on the progress made with updates to the exams. Much work remains to be done.

Old Business

Senate Bill 48 – Mr. Schofield informed the Membership that SB 48 had passed and will become effective on July 7, 2009. The Membership discussed what the Board's responsibilities will be given the new mandate to license geothermal contractors who drill borings for closed loop systems. Some of the issues discussed included compiling a list of those contractors and sending out notices to the industry, the development of criteria for issuing exemptions to contractors if deemed necessary, and whether the Board should establish a new license category for geothermal drilling contractors.

Radon Aeration Systems – Mr. Schofield informed the Membership that he had been invited to attend the next Plumber's Licensing Board meeting to discuss the letter the Water Well Board sent regarding reports of squirrels falling into radon aeration systems through the vent pipe.

New Business

Thermonexus Submittal for Approval – The Board reviewed the materials submitted by Kevin Maher on the HPGX grout. Based on the materials submitted the Board was satisfied that the grout would resist shrinkage and provide an effective seal. The Board voted to approve HPGX grout in accordance with We 602.14(d)(3).

Pump System Installations for Geothermal Application - Mr. Schofield explained that he had been contacted by the State Electrical Inspectors regarding the extent to which licensed pump installers were wiring geothermal pump systems. Because this is a new technology that is gaining popular demand in New Hampshire the Electrical Safety and Licensing Section is gathering information about these systems to make sure the electrical wiring is being performed by the properly licensed persons. Staff met with Mark Hilbert, the Senior State Electrical Inspector, and they agreed to conduct inspections together of the various system designs.

Steve Smith offered to invite Mr. Schofield and Mr. Hilbert to look at the residential geothermal system he installed at his home.

Contractor Questions – Mr. Schofield informed the Board he had received an inquiry from a licensee asking if he could use the bentonite drilling mud used in mud rotary to satisfy the grouting requirement. This question was actually asked during the CETCO presentation. The response from the CETCO representative was that drilling muds do not have high enough solids to do anything for grouting purposes. The Board affirmed that drilling muds cannot be used as a substitute for grouting. The licensee also requested if he could place bentonite grout down the casing and let it flow into the annulus under the casing. The Board rejected the idea as a substitute for the positive displacement method.

Mr. Schofield also received comments from two cable tool contractors regarding the new rule for extending a minimum of 10 feet of casing into competent bedrock. The contractors expressed

concern that the new rule could not be complied with, when driving 6 inch casing. Staff recommended that the contractors send a letter to the Board expressing their concerns.

The meeting was adjourned at 4:15 pm.

Rene Pelletier
Water Well Board Secretary